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Understanding The Impact of Entrepreneurial Orientation on Smes' Performance. The Role of The Financing Structure

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Abstract

Based on a sample of 300 small and medium enterprises (SMEs) located in the Province of Udine (north East of Italy) and the Kärntner Region (South of Austria) we perform an analysis of the impact of Entrepreneurial Orientation (EO) on SMEs' subjective performances. We develop a model in which EO dimensions are moderated by the role of financial leverage. The present work is part of a research project on an interregional co-operation programme Italy-Austria (INTERREG IV) financed by the European Regional Development Fund whose program areas include the Province of Udine and the Kärntner Region. Subjective performances has been widely investigated in academic literature where various streams of research have been developed. A prominent field of research focuses on the constructs of EO orientation and their ability to prompt performances through innovative attitude, risk taking behaviour, aggressiveness, autonomy and competitive energy. Another established field of research focuses on the impact of financial structure (i.e. leverage) on performances, although with ambiguous results.. We find support to the hypothesis that competitive energy might have a significant and positive impact in driving performance, which has obvious implications for managers and theoreticians. We also find that leverage might have a significant moderating role through interactions with EO dimensions.

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1. EO and performance

The study of EO has its roots in the field of strategy research, especially in the writings of Mintzberg (1973) and

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Miles and Snow (1978). Mintzberg identified three strategy types: entrepreneurial, planning, and adaptive, while Miles and Snow (1978) wrote about “prospector firms” and the role that an entrepreneurial approach to strategy plays when firms are faced with decision such as what products to offer or markets to enter. Consistent with Mintzberg, et al. (1976) who noted that strategy making is “important, in terms of the actions taken, the resources committed, or the precedents set” (p. 246), EO represents the policies and practices that provide a basis for entrepreneurial decisions and actions. Thus, EO may be viewed as the entrepreneurial strategy-making processes that key decision makers use to enact their firm’s organizational purpose, sustain its vision, and create competitive advantage(s). Building on these early references to an entrepreneurial approach to strategy, Miller (1983) was one of the first to describe the components of the approach. He defined an entrepreneurial firm as one that “(...) engages in product marketing innovation, undertakes somewhat risky ventures, and is first to come up with proactive innovations (p. 771)”. Later, Morris and Paul (1987) refined this definition: EO is the “(...) inclination of top management to take calculated risks, to be innovative, and to demonstrate proactiveness (p. 41)”. A large stream of research has examined the concept of entrepreneurial orientation (EO). EO has become a central concept in the domain of entrepreneurship that has received a substantial amount of theoretical and empirical attention (Covin, et al., 2006). EO refers to the strategy-making processes that provide organizations with a basis for entrepreneurial decisions and actions (e.g., Lumpkin and Dess, 1996; Wiklund and Shepherd, 2005). More specifically Lumpkin and Dess (1996) suggested that two additional dimensions were salient to EO. Drawing on Miller’s (1983) definition and prior research (e.g., Burgelman, 1984; Hart, 1992; MacMillan and Day, 1987; Venkatraman, 1989), they identified competitive aggressiveness and autonomy as additional components of the EO construct. A more complex construct of EO regards dimensions devoting greater energy derived from personal commitment, and having autonomy. In this case some authors support the importance of autonomy, competitive energy and aggressiveness. The large and growing literature on EO suggests different operationalization of entrepreneurial orientation (EO) that we have summarized in table 1.

Table 1. The EO Dimensions in literature

Article	EO dimensions
A configurational approach of the relationship between EO and Growth of FF (Casillas et al. 2010).	Innovativeness, Risk Taking, Proactiveness.
A critical examination of the EO-performance relationship (Andersen, 2010).	Innovativeness, Risk Taking, Proactiveness.
Clarifying the Entrepreneurial Orientation Construct and linking it to Performance (Lumpkin and Dess, 1996).	Risk Taking, Innovativeness, Proactiveness, Competitive Aggressiveness, Autonomy
Contextual influences on the CE-performance relationship: a longitudinal analysis (Zahra and Covin, 1995).	Innovativeness, Risk Taking, Proactiveness.
Corporate Entrepreneurship in Family Firms: a family firms (Kellermanns and Eddleston, 2006).	Innovativeness, Risk Taking, Proactiveness
Cross-cultural reliability and validity of a scale to measure firm entrepreneurial orientation (Knight, 1997).	Innovativeness, Risk Taking, Proactiveness
Cross-national invariance of the EO scale (Hansen et al., 2011).	Innovativeness, Proactiveness, Risk Taking
Culture, Entrepreneurial Orientation and Global Competitiveness (Lee and Peterson, 2011).	Innovativeness, Proactiveness, Risk Taking, Competitive Aggressiveness, Autonomy
Deconstructing the relationship between entrepreneurial orientation and business performance at the embryonic stage of firm growth. (Hughes and Morgan, 2007).	Risk Taking, Innovativeness, Proactiveness, Competitive Aggressiveness, Autonomy
Entrepreneurial Behavior in Family Firms: a replication study (Weismeier-Sammer, 2011).	Innovativeness, Risk Taking, Proactiveness.
Entrepreneurial Orientation and Business Performance- A replication study (Hermann et al. 2010).	Innovativeness, Risk Taking, Proactiveness.
Entrepreneurial Orientation and firm performance: the role of knowledge creation process (Li et al. 2009).	Innovativeness, Risk Taking, Proactiveness, Competitive Aggressiveness, Autonomy
Entrepreneurial Orientation and Growth of SMEs: a causal model (Moreno and Casillas, 2008).	Innovativeness, Proactiveness, Risk Taking

Entrepreneurial Orientation and New Venture performance: the moderating role of intra- and extraindustry social capital (Stam and Elfring, 2008).	Innovativeness, Risk Taking, Proactiveness.
Entrepreneurial Orientation and small business performance: a configurational approach (Wiklund and Shepherd, 2005).	Innovativeness, Risk Taking, Proactiveness.
Entrepreneurial Orientation in Family Firms: a generational perspective (Cruz and Nordqvist, 2012).	Innovativeness, Risk Taking, Proactiveness.
Entrepreneurial Orientation of Family Firms: Family and environmental dimensions (Casillas et al. 2010).	Innovativeness, Risk Taking, Proactiveness.
Entrepreneurial Orientation, Learning Orientation and Firm Performance (Wang, 2008).	Innovativeness, Risk Taking, Proactiveness, Competitive Aggressiveness
Entrepreneurial Orientation, risk taking and performance in family firms (Naldi et al., 2007).	Risk Taking, Innovativeness, Proactiveness
EO in cross cultural research: assessing measurement invariance in the Construct (Runyan and Ge, 2011).	Innovativeness, Proactiveness, Risk Taking
EO: the role of institutional environment and firm attributes in shaping innovation and Proactiveness (Dickson, 2004).	Innovativeness, Risk Taking, Proactiveness.
Exploring an inverted u-shape relationship between EO and performance in Chinese ventures (Tang J. et al., 2008).	Innovativeness, Proactiveness, Risk Taking
Internal capabilities, external networks, and performance: A study based on technology based ventures.(Lee, C. et al. 2001).	Innovativeness, Risk Taking, Proactiveness
Linking two dimensions of EO to firm performance: the moderating role of environment and industry life cycle. (Lumpkin and Dess, 2001).	Proactiveness, Innovativeness, Risk Taking, Competitive Aggressiveness
Strategic management of small firms in hostile and benign environments (Covin and Slevin, 1989).	Innovativeness, Proactiveness, Risk Taking
Strategic process effects on the EO-sales growth rate relationship (Covin et al. 2006).	Innovativeness, Risk Taking, Proactiveness.
The effect of intrapreneurship on corporate performance (Felício, J. A.; Rodrigues, R.; Caldeirinha, V. R., 2012).	Risk Uncertainty, Risk Challenges, Competitive Energy, Autonomy, Innovativeness, Proactiveness,
The effects of EO and Marketing Information on the performance of SMEs (Keh et al. 2006).	Innovativeness, Risk Taking, Proactiveness.
The moderating impact of internal social exchange processes on the EO-performance relationship (De Clercq et al. 2009).	Innovativeness, Risk Taking, Proactiveness.
Understanding and measuring autonomy: an EO perspective (Lumpkin et al., 2009).	Innovativeness, Proactiveness, Risk Taking

As we can see from the table above the salient dimensions of EO can be derived from a review and integration of the strategy and entrepreneurship literatures (e.g., Covin and Slevin, 1991; Miller, 1983; Miller and Friesen, 1978; Venkatraman, 1989). The dimensions of EO have been identified and used consistently in the literature: innovativeness, risk taking, and proactiveness as well as competitive aggressiveness, autonomy and competitive energy. We define each EO construct as follows:

Risk taking can be identified as the propensity involves taking bold actions by venturing into the unknown, borrowing heavily and/or committing significant resources to ventures in uncertain environments.

Innovativeness is the predisposition to engage in creativity and experimentation through the introduction of new products/services as well as technological leadership via R & D in new processes. Risk taking involves taking bold actions by venturing into the unknown, borrowing heavily and/or committing significant resources to ventures in uncertain environments.

Proactiveness is an opportunity-seeking, forward-looking perspective characterized by the introduction of new products and services ahead of the competition and acting in anticipation of future demand.

Competitive aggressiveness is the intensity of a firm's efforts to outperform industry rivals and taking them head on at every opportunity is defined as competitive aggressiveness. It is characterized by a strong offensive posture,

which is directed at overcoming competitors (Lumpkin and Dess, 1997). Venkatraman (1989) suggested that competitive aggressiveness is accomplished by setting ambitious market share goals and taking bold steps to achieve them, such as cutting prices and sacrificing profitability.

Autonomy reflects the “independent spirit” (Lumpkin and Dess, 1996) including the concept of free and independent action and decision taken (Callaghan and Venter, 2011).

Competitive energy reflects the intensity of the companies’ efforts to overcome their rivals in the industry, characterized by a combative stance and a vigorous response to the actions of competitors (Felicio et al., 2012).

Regarding the multidimensional concept of performance we have to point out that its link with EO may depend upon the indicators used to assess performance (Lumpkin and Dess, 1997). The empirical literature reports a high diversity of performance indicators (Combs et al., 2005; Venkatraman and Ramanujam, 1986); a common distinction is between financial and non-financial measures. In this study, In this article, we use non-financial measures of SME performance (Murphy and Callaway, 2004, Murphy et al., 1996 and Gupta and Govindarajan, 1984).

It’s widely accepted in literature that Entrepreneurial Orientation is positively linked to firm performances (e.g. O’Shea, Allen, Chevalier and Roche, 2005). Typically empirical and theoretical researches suggest that increasing the EO of the firm is associated positively with financial performance (Covin and Slevin, 1989; Miller, 1983; Zahra, 1993). However, there has been much debate over the appropriate intensity of entrepreneurial behavior and the implications entrepreneurial activities such as risk taking will have on firm performance (Zahra, 1993). Miller and Friesen (1982) even warn that increasing entrepreneurship beyond a particular threshold can harm a firm’s financial performance. As already seen, a rather large stream of research thus far has examined the EO-performance link. However, the results of these studies have generally not provided clear evidence of this relationship. Several studies have found that those businesses that adopt a more entrepreneurial orientation perform better (e.g., Wiklund, 2006; Zahra, 1991; Zahra and Covin, 1995). However, these findings are not uncontested. Auger, et al. (2003) and Smart and Conant (2011), for example, were unable to find a significant relationship between EO and performance, whereas Hart (1992) argues that entrepreneurial-type strategies may even be associated with poor performance. As seen, the results of these studies appear contradictory and more research is needed (Mason and Gos, 2014).

2. EO and leverage

It is well known that leverage affects the financial risk to the firm in relation to adequacy of returns on firm’s assets compared with the cost of debt. However empirical literature on the impact of debt on the performance of firms is inconclusive (Fatoki, 2012), with some research finding a negative impact (Eriotis et al., 2002; Bartholdy and Mateus, 2006) while other accounting for a performance enhancing effect of leverage (Negash, 2002; Hadlock and James, 2002). Given that high levels of EO reinforce capabilities in engaging in strategic planning, identifying customer needs and new opportunities (Hartsfield et al., 2008) and that the use of leverage might have an impact on performances, the access to debt finance can play the role of intermediate variable, mediating the relationship between EO and the performance of SMEs.

Therefore we can assume that access to debt finance moderates the relationship between EO and the performance of firms.

The present study investigated how each EO dimension related to the performance and leverage affect the relationship. Figure 1 illustrates the theoretical model proposed in this paper. As can be seen in the figure, we hypothesize EO as a multidimensional construct consisting in six dimensions, leverage as a moderator variable and performance as the dependent variable. Firm age and firm size are proposed as control variables.

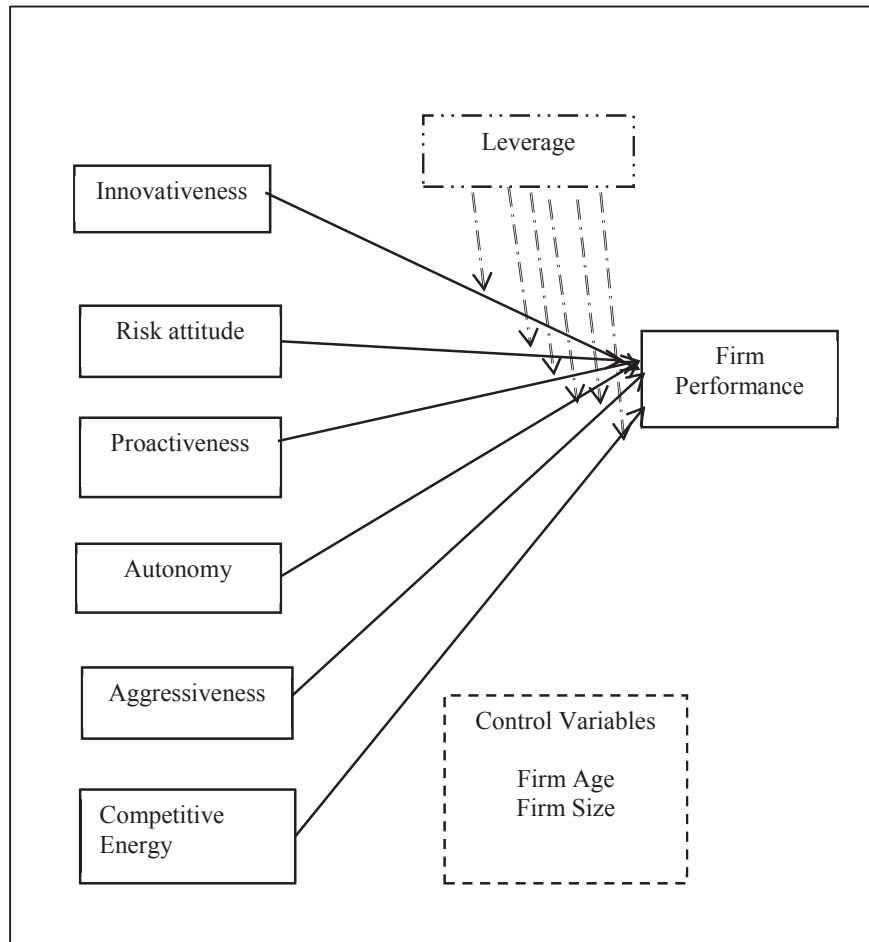


Fig. 1. Proposed model

3. Hypothesis Development

Several studies pointed out a positive relationship between innovativeness and firms' performance (e.g. Soininen, 2012; Hameed and Ali, 2011). On the basis of such census the following hypothesis was proposed:

Hypothesis 1. The greater the entrepreneur's innovativeness, the greater the performances of SMEs.

Despite previous studies accounts for a negative relationship between risk-taking and performance, it is in the nature of entrepreneurship to engage in risk-taking activities in return for expected rewards (Gebreegziabher and Tadesse, 2014; Jalali et al., 2014; Segal, Borgia, and Schoenfeld, 2005). It is also understood that entrepreneurs are more eager to take risks than non-entrepreneurs (Mc Clelland, 1961). Risk-taking orientation has also been regarded as having a direct relation with the likelihood of seizing beneficial deals and, in general, is positively related to success (Frese, Brantjes, and Hoorn, 2002).

Thus:

Hypothesis 2. The greater the entrepreneur's risk-taking behavior, the greater the performances of SMEs.

Proactiveness is another relevant dimension of entrepreneurship. Indeed, it is a fundamental attitude for firms achieving competitive advantage and innovating (Brandle, 2001; Jalali et al., 2014). It has been argued that proactive firms are far ahead of their competitors in finding profitable opportunities and taking initiatives that enhance

advantage, which would allow to charge higher prices than their rivals (Craig et al., 2014; Zahra and Covin, 1995). Wiklund and Shepherd (2005) argue that proactive firms better govern the market by capturing the dispensation channel and establishing brand recognition.

Thus:

Hypothesis 3. The greater the entrepreneur's proactiveness, the greater the performances of SMEs.

Regarding the autonomy dimension of EO some studies have been proven that autonomy is positively linked to firms' performance (Awang et al., 2009) however other researches do not confirmed such results (e.g. Casillas and Moreno, 2010; Hughes and Morgan, 2007). The mixed nature of this relationship showed the necessity to improve our knowledge about this link. In our paper the following hypothesis is suggested:

Hypothesis 4. The greater the entrepreneur's autonomy, the greater performance of SMEs.

The relationship between competitive aggressiveness and firms' performance seems to be quite controversial. Some author proved a positive link between these two dimensions (i.e. Madhoushi et al., 2011) while some other have found a null (relationship Casillas and Moreno, 2010; Hughes and Morgan, 2007) between competitive aggressiveness and firms performance.

Hypothesis 5. The greater the entrepreneur's aggressiveness, the greater performance of SMEs.

Competitive energy is a broad concept. It reflects the intensity of firm's efforts in its competitive struggle against competitors in the industry. Combative attitude and vigor in responding to competitors' actions are major features of competitive energy.

Researches who have include this dimension in EO (e.g. Felicio et al., 2012) have confirmed its positive impact on firms' performance.

Hypothesis 6. The greater the entrepreneur's competitive energy, the greater the performance of SMEs.

According to the current literature there exit a positive relation between EO's dimensions and performance. Moreover to the extent that leverage negatively affects performances (see previous discussion), it is expected to weaken the positive link between EO's dimensions and performance due to its negative impact on firms' performance. The degree of leverage is, than, influenced by financing gaps which generally affect SMEs, especially in the form of equity gap (OECD, 2007; Gualandri and Venturelli, 2008). Difficulties in accessing external own funds might turn in increasing leverage and deepen financial constraints. The latter, in particular, are accounted for having a major impact for SMEs posing significant boundaries to firm's growth (Beck, Demirgüç-Kunt, Laeven, and Maksimovic, 2006; Schiffer and Werder, 2001). Other studies, moreover, find a positive relation between firm's size and access to greater levels of leverage (Berger and Udell, 1998; Michaelas et al., 1999; Romano et al. 2001). Finally, it is interesting the relation to between growth opportunities and debt capacity. Prominent contributors show how firms having greater growth opportunities operate with lower target levels for the leverage ratio (Jensen and Meckling, 1976; Myers, 1977; Stulz, 1990).

Therefore we propose that leverage plays a negative role in the relationship between EO's dimensions and firms' performance. Thus, the following hypothesis is formulated:

Hypothesis 7. Leverage has a moderating role between the entrepreneur's innovativeness (or propensity for innovativeness, risk-taking, or proactiveness, or autonomy, or competitive energy) and the firm's performance.

4. Measurement

The items used to measure constructs, except the leverage one, were all assessed on "Strongly disagree" (1) to "Strongly agree" (7) seven point Likert-type scales, following prominent studies and with modifications made following pre-tests. We developed scales for EO dimensions based on Lumpkin and Dess (1996). Major sources for risk-taking (RISK - six items) measures were studies by Hornsby, Kuratko, and Zahra (2002), and Morgan and Strong (2003); we draw some items from Acedo and Jones (2007) as well. We than relied on Calantone et al. (2002) for innovativeness (INNOV - 4 items) measures. After that, we built on the works by Acedo and Jones (2007), Hult and Ketchen (2001), and Morgan and Strong (2003) for Proactiveness (PROAC - 10 items). Lumpkin and Dess (2001) was the base for Competitive aggressiveness (AGRESS - 6 items) measures. Finally, the autonomy (AUTON - 9 items) measures were drawn from Engel (1970), Hornsby et al. (2002), and Spreitzer (1995). Competitive Energy (COMPEN - 7 items) was derived from Felicio et al. (2012).

In relation to the measurement of leverage, this is based on the standard definition of leverage i.e. ratio of financial debt on total sources of funds (financial debt + own funds).

In examining the dependent variable business performance (SUB_PER- eight items), we used subjective dimensions regarding growth (three items), efficiency (two items) and profit (three items). Following Koe (2013) growth was assessed by respondents' satisfaction on sales growth, employee growth, market share growth. Efficiency was measured by respondents' satisfaction on return on investment (ROI) and return on equity (ROE). Profit was determined by the respondents' satisfaction on return on sales, profit margin and profit retention.

Regarding control variables we have chosen firm's age and size as the two independent control variables considered to minimize any spurious results. The firm's age was the number of years elapsing since its establishment (e.g. Casillas, Moreno, and Barbero, 2010; Covin, Green, and Slevin, 2006). The firm's size was obtained from the natural logarithm of the total number of its employees (Casillas et al., 2010; Covin et al., 2006).

5. Sample and methodology

Our research is based on a survey conducted on a sample of 300 SMEs falling within the program areas of the research project who were requested to answer to a questionnaire. More precisely, we addressed 200 SMEs belonging to the province of Udine and 100 SMEs of the Kärntner region. According to the European definition of SME we addressed firms having less than 250 employees, 50 million turnover or 43 million balance sheet total.

Table 2 below compares our sub-samples according a few relevant attributes (the reference year is 2012) comprising the age of the entrepreneur, the ownership concentration, the number of employees (and the percentage of women) and the percentage of export on total sales (on balance, we have 27.5% of firms in the province of Udine which export their products against the 40.1% in Kärntner). Ownership concentration, in particular, expresses the percentage of ownership rights held by the entrepreneur and its family. We also account for the involvement of women in ownership and in the board.

Table 2. The sub-samples: a comparison

	Udine		Kärntner	
	Average	St. Dev	Average	St. Dev
Age	53.5	12.6	46.8	9.7
Ownership concentration (%)	90.3	22.9	90.7	23.1
% of female shareholding	42.4	28.6	39.1	41.2
% of women in the board	46.8	30	45.9	45.8
Employees (numb)	14.3	36.4	48.2	104.8
% of women	32.7	31.5	40.6	32.8
Export on sales (%)	9.2	21.2	16.1	28.8

Major differences across our two sub-samples are to be traced in the age of the entrepreneur, number of employees and the export attitude of firms. Summarizing, firms in Kärntner are, on average, run by younger entrepreneurs, have a far wider employee base with a greater participation of women and are far more export oriented than their counterparties in the province of Udine. By contrast, there are no significant differences in ownership structure. In both areas firms are strongly controlled by the entrepreneur and its family. Similar is also the percentage of female ownership and the involvement of women in the board. However, firms in the province of Udine have, on average, a slightly greater female involvement but with lower dispersion.

We investigate the drivers of subjective performances. To accomplish this task we perform a regression analysis where we test 6 models. The first explains performance against our control variables (Size and Age). The second introduce in the regression the main effects and, namely, EO dimensions and competitive energy. The third adds the effect of leverage, assumed as the moderating variable. We are also interested in investigating the behaviour of performances in the two program areas. Models five and six, therefore, finally perform the full analysis for each of

our sub-samples. Hereafter, in table 3 we report mean and standard deviation for each variable and the pairwise correlations between our variables.

Table 3. Mean, Standard Deviation and Pairwise correlations (5% significance level).

	Mean	St_ Dev	Sub_ Per	Innov	Risk	Proac	Aggress	Auton	CompEn	Le	Size	Age
Sub_ Per	28.25	8.31	1									
Innov	10.21	4.77	0.245*	1								
Risk	14.52	4.26	0.112	0.285*	1							
Proac	19.76	3.35	0.282*	0.261*	0.198*	1						
Aggress	12.40	4.46	0.196*	0.435*	0.434*	0.177*	1					
Auton	14.26	3.20	-0.115	0.056	0.160*	-0.085	0.0683	1				
Comp- En	24.00	4.75	0.475*	0.173*	0.104	0.363	0.1893*	-0.0727	1			
Le	0.42	0.35	-0.210*	-0.025	0.042	-0.044	0.0091	0.0056	-0.0447	1		
Size	0.98	0.56	0.155*	0.143*	0.094	0.050	0.2347*	0.0231	0.1635*	0.15*	1	
Age	26.66	26.99	-0.141*	-0.098	-0.093	-0.049	-0.0794	-0.02	-0.0853	0.076	0.38*	1

6. Results and implications

We now turn to the analysis of the drivers of subjective performances. We first test the impact of control variables than we introduce the main effects. After that we add the impact of our moderator and, finally, we introduce the interaction effects. Table 4 below reports the main results.

Table 4. Regression results

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Control variables						
Size	3.696***	1.966**	2.372**	2.294**	2.594*	2.446
Age	-0.074***	-0.047**	-0.049***	-0.047**	-0.046	-0.064**
Main effects						
Innov		0.240**	0.159	0.239	0.476*	0.130
Risk		-0.045	0.045	0.216	0.636**	-0.418
Proac		0.237	0.198	0.033	-0.547	0.678
Aggress		0.053	-0.013	-0.283	-0.511**	0.435
Auton		-0.226	-0.208	-0.225	-0.234	1.211*
CompEn		0.637***	0.629***	0.740***	0.773**	0.575*
Moderator						
Le			-4.500***	-6.381	-14.350	61.232*
Interactions						

Innov*Le				-0.442	-0.994	0.758
Risk*Le				-0.203	-0.648**	0.159
Proac*Le				0.287	0.958	-0.988
Aggress*Le				0.658	1.216**	-1.391
Auton*Le				0.046	0.260	-2.806**
CompEn*Le				-0.173	-0.232	-0.075
Constant	26.682	8.154	10.978	11.896	15.267	-14.307
F	10.83***	10.68***	9.59***	5.92***	4.11***	2.45***
R2	0.076	0.277	0.289	0.301	0.328	0.364
Adjusted R2	0.069	0.251	0.259	0.253	0.248	0.215

*** 1% significance level; ** 5% significance level; *10% significance level

We account for a significant impact of both control variables in models from 1 to 4. The size of the firms is positive related with performances, while age presents a negative relation which is quite expected. With the age growing, the firm's business becomes more mature, providing a plausible explanation for declining performances. As model 5 and 6 suggest, however, the behavior of subjective performances is different among our two areas. In the province of Udine only firm's size has a significant effect on performances while in Kärntner region firm's age is the sole control variable having a significant impact on performances. When analyzing for the main effects we find a positive and significant impact of innovativeness and competitive energy. Our results suggest, therefore, that well positioned innovative forms experience higher subjective performances. We also find that the effect of the moderator (the financial leverage) is highly significant. The negative sign of the relation shows that the higher the leverage, the lower the subjective performance of firms. When introducing the leverage, however, only competitive aggressiveness retain it significant impact on level of main effects. By contrast, innovativeness is no longer significant.

When adding interactions (Model 4), things do not change. The R-square is increasing compared with the other three models. Table 5 below compares our results for the full model (Model 5) with the hypothesis.

Table 5. Summary of our hypothesis

Hypothesis	Description	Results
Hypothesis 1	The greater the entrepreneur's innovativeness, the MORE performances of SMEs.	Confirmed
Hypothesis 2	The greater the entrepreneur's risk-taking behavior, the MORE performances of SMEs.	Confirmed
Hypothesis 3	The greater the entrepreneur's proactiveness, the MORE performances of SMEs.	Confirmed
Hypothesis 4	The greater the entrepreneur's autonomy, the MORE performance of SMEs.	Not confirmed
Hypothesis 5	The greater the entrepreneur's aggressiveness, the MORE performance of SMEs.	Not confirmed
Hypothesis 6	The greater the entrepreneur's competitive energy, the MORE performance of SMEs.	Confirmed
Hypothesis 7	Leverage has a moderating role between the entrepreneur's innovativeness (or propensity for innovativeness, risk-taking, or proactiveness, or autonomy, or competitive energy) and the firm's performance.	Not confirmed

Finally, our results account for a significantly different behaviour of subjective performances in the two program areas. We already discussed the differing impact of control variables. In the province of Udine there is a positive and significant impact of innovativeness, risk and aggressiveness in explaining performances. We account also for a

negative impact of aggressiveness. Leverage is not significant, but it becomes the interaction of leverage with risk and aggressiveness (the signs are reverted compared with the main effect). We confirm hypothesis 1, 2, 6 and 7. In the Kärntner region, by contrast, only autonomy and competitive energy are positively and significantly (although at 10% level) related with performances. As suggested by the moderator, here, increasing leverage positively impacts on performances. We account also of a significant interaction effect of leverage with autonomy. The confirmed hypothesis are, here, 5, 6 and 7. It is to note, finally, that regression on the two sub-samples provides increasing R-squares.

7. Conclusions

We study the drivers of subjective performances for a sample of SMEs in the province of Udine (Italy) and the Austrian region of Kärntner. We provide evidence that the geographical location of SMEs in our sample plays a significant role in explaining subjective performances. Our results confirm the hypothesis of a positive relation between innovativeness, risk, proactiveness and competitive energy with subjective performances. The behaviour of subjective performances, however, differs among the two sub-samples. First of all, there is a different response to control variables with firms in the province of Udine being more responsive to size while Kärntner firms being more responsive to age. We also found a different impact of main effects. In Udine performances are significantly and positively related to innovativeness, risk and competitive energy. There is a negative and significant impact of aggressiveness (again we do not confirm hypothesis 5). In Kärntner we found a positive and significant relation with autonomy and competitive energy.

Our study may provide several suggestions for both managers and researchers. We provided insight to the hypothesis that the different EO's dimensions might play a significant role in driving performance. Particularly the study emphasises the role of the EO's dimension i.e. "competitive energy" in implementing firms' performance.

This suggests the importance of autonomy for entrepreneurs in order to make choices and devote resources for implementing combative stance and more generally struggling to overcome competitors and promptly answer to their actions.

Our study embraces the suggestions of some authors (i.e. Koe, 2013; Fatoki, 2012) to consider the moderating role of different variables on the EO-performance link in a multidimensional conceptualization of EO. We are aware that our paper has its limitations that can provide directions for future research. Firstly there certainly exist other potential moderators of the relation under investigation (i.e. technological intensity, leadership styles, environmental turbulence, ownership structure, etc.). The second limitation of our research is connected to the cross sectional nature of our data where time series dimension is neglected. Finally we tested our hypotheses by using sample of firms and individuals from a quite limited area.

References

- Acedo, F. J., & Jones, M. V. (2007). Speed of internationalization and entrepreneurial cognition: Insights and a comparison between international new ventures, exporters and domestic firms. *Journal of World Business*, 42(3), 236-252.
- Andersén, J. (2010). A critical examination of the EO-performance relationship. *International Journal of Entrepreneurial Behaviour & Research*, 16(4), 309-328.
- Auger, P., BarNir, A., & Gallagher, J. M. (2003). Strategic orientation, competition, and internet-based electronic commerce. *Information Technology and Management*, 4(2-3), 139-164.
- Awang, A., Khalid, S. A., Kassim, K. M., Ismail, M., Zain, R. S., & Madar, A. R. S. (2009). Entrepreneurial orientation and performance relations of Malaysian bumiputera SMEs: the impact of some perceived environmental factors. *International Journal of Business and Management*, 4(9), p84.
- Bartholdy, J., & Mateus, C. (2006). Debt and Taxes: Evidence from bank-financed unlisted firms. *Aarhus School of Business, Finance Research Group, Working paper F-2006*, 2.
- Beck, T., Demirgüç-Kunt, A., Laeven, L., & Maksimovic, V. (2006). The determinants of financing obstacles. *Journal of International Money and Finance*, 25(6), 932-952.
- Berger, A. N., & Udell, G. F. (1990). Collateral, loan quality and bank risk. *Journal of Monetary Economics*, 25(1), 21-42.
- Burgelman, R. A. (1984). *Designs for corporate entrepreneurship in established firms*. Graduate School of Business, Stanford University.

- Calantone, R. J., Cavusgil, S. T., & Zhao, Y. (2002). Learning orientation, firm innovation capability, and firm performance. *Industrial Marketing Management*, 31(6), 515-524.
- Callaghan, C., & Venter, R. (2011). An investigation of the entrepreneurial orientation, context and entrepreneurial performance of inner-city Johannesburg street traders. *Southern African Business Review*, 15(1), 28-48.
- Casillas, J. C., Moreno, A. M., & Barbero, J. L. (2009). A configurational approach of the relationship between entrepreneurial orientation and growth of family firms. *Family Business Review*.
- Combs, J. G., Crook, T. R., & Shook, C. L. (2005). The dimensionality of organizational performance and its implications for strategic management research. *Research Methodology in Strategy and Management*, 2, 259-286.
- Covin, J. G., & Slevin, D. P. (1989). Strategic management of small firms in hostile and benign environments. *Strategic Management Journal*, 10(1), 75-87.
- Covin, J. G., Green, K. M., & Slevin, D. P. (2006). Strategic process effects on the entrepreneurial orientation–sales growth rate relationship. *Entrepreneurship Theory and Practice*, 30(1), 57-81.
- Cruz, C., & Nordqvist, M. (2012). Entrepreneurial orientation in family firms: A generational perspective. *Small Business Economics*, 38(1), 33-49.
- De Clercq, D., Dimov, D., & Thongpapanl, N. T. (2010). The moderating impact of internal social exchange processes on the entrepreneurial orientation–performance relationship. *Journal of Business Venturing*, 25(1), 87-103.
- Dickson, P. H. (2004). Entrepreneurial orientation: The role of institutional environment and firm attributes in shaping innovation and proactiveness. *pat*, 404, 894-4372.
- Engel, G. V. (1970). Professional autonomy and bureaucratic organization. *Administrative Science Quarterly*, 12-21.
- Eriotis, N. P., Frangouli, Z., & Ventoura-Neokosmides, Z. (2011). Profit margin and capital structure: an empirical relationship. *Journal of Applied Business Research (JABR)*, 18(2).
- Fatoki, O. (2012). The Impact of Entrepreneurial Orientation on Access to Debt Finance and Performance of Small and Medium Enterprises in South Africa. *J Soc Sci*, 32(2), 121-131.
- Felicio, J. A., Rodrigues, R., & Caldeirinha, V. R. (2012). The effect of entrepreneurship on corporate performance. *Management Decision*, 50(10), 1717-1738.
- Frese, M., Brantjes, A., & Hoorn, R. (2002). Psychological success factors of small scale businesses in Namibia: The roles of strategy process, entrepreneurial orientation and the environment. *Journal of Developmental Entrepreneurship*, 7(3), 259-282.
- Gebreegziabher, K., & Tadesse, T. (2014). Risk perception and management in smallholder dairy farming in Tigray, Northern Ethiopia. *Journal of Risk Research*, 17(3), 367-381.
- Gualandri, E., Venturelli, V., & Braga, F. (2008). *Bridging the equity gap for innovative SMEs*. Palgrave Macmillan.
- Gupta, A. K., & Govindarajan, V. (1984). Business unit strategy, managerial characteristics, and business unit effectiveness at strategy implementation. *Academy of Management Journal*, 27(1), 25-41.
- Hadlock, C. J., & James, C. M. (2002). Do banks provide financial slack?. *The Journal of Finance*, 57(3), 1383-1419.
- Hameed, I., & Ali, B. (2011). Impact of Entrepreneurial Orientation, Entrepreneurial Management and Environmental Dynamism on Firm's Financial Performance. *Journal of Economics & Behavioral Studies*, 3(2).
- Hansen, J. D., Deitz, G. D., Tokman, M., Marino, L. D., & Weaver, K. M. (2011). Cross-national invariance of the entrepreneurial orientation scale. *Journal of Business Venturing*, 26(1), 61-78.
- Hart, S. L. (1992). An integrative framework for strategy-making processes. *Academy of Management Review*, 17(2), 327-351.
- Hartsfield, S., Johansen, D., & Knight, G. (2008). Entrepreneurial orientation, strategy, and marketing capabilities in the performance of born global firms. *International Business: Research, Teaching and Practice*, 2(1), 12-38.
- Hermann, F., Kessler, A., & Fink, M. (2010). Entrepreneurial orientation and business performance—a replication study. *Schmalenbach Business Review (sbr)*, 62(2), 175-198.
- Hornsby, J. S., Kuratko, D. F., & Zahra, S. A. (2002). Middle managers' perception of the internal environment for corporate entrepreneurship: assessing a measurement scale. *Journal of Business Venturing*, 17(3), 253-273.
- Hughes, M., & Morgan, R. E. (2007). Deconstructing the relationship between entrepreneurial orientation and business performance at the embryonic stage of firm growth. *Industrial Marketing Management*, 36(5), 651-661.
- Hult, G. T. M., & Ketchen, D. J. (2001). Does market orientation matter?: A test of the relationship between positional advantage and performance. *Strategic Management Journal*, 22(9), 899-906.
- Jalali, A., Jaafar, M., & Ramayah, T. (2014). Entrepreneurial orientation and performance: the interaction effect of customer capital. *World Journal of Entrepreneurship, Management and Sustainable Development*, 10(1), 48-68.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: managerial behavior, agency costs, and ownership structure. *Journal of Financial Economics*, 3(4), 78-79.
- Keh, H. T., Nguyen, T. T. M., & Ng, H. P. (2007). The effects of entrepreneurial orientation and marketing information on the performance of SMEs. *Journal of Business Venturing*, 22(4), 592-611.
- Kellermanns, F. W., & Eddleston, K. A. (2006). Corporate entrepreneurship in family firms: A family perspective. *Entrepreneurship Theory and Practice*, 30(6), 809-830.
- Koe, W. L. (2013). Entrepreneurial Orientation (EO) and Performance of Government-Linked Companies (GLCs). *Journal of Entrepreneurship, Management and Innovation*, 9(3), 21-41.
- Knight, G. A. (1997). Cross-cultural reliability and validity of a scale to measure firm entrepreneurial orientation. *Journal of Business Venturing*, 12(3), 213-225.

- Lee, C., Lee, K., & Pennings, J. M. (2001). Internal capabilities, external networks, and performance: a study on technology-based ventures. *Strategic Management Journal*, 22(6-7), 615-640.
- Lee, S. M., & Peterson, S. J. (2001). Culture, entrepreneurial orientation, and global competitiveness. *Journal of World Business*, 35(4), 401-416.
- Li, Y. H., Huang, J. W., & Tsai, M. T. (2009). Entrepreneurial orientation and firm performance: The role of knowledge creation process. *Industrial Marketing Management*, 38(4), 440-449.
- Lumpkin, G. T., Cogliser, C. C., & Schneider, D. R. (2009). Understanding and measuring autonomy: An entrepreneurial orientation perspective. *Entrepreneurship Theory and Practice*, 33(1), 47-69.
- Lumpkin, G. T., & Dess, G. G. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of Management Review*, 21(1), 135-172.
- Lumpkin, G. T., & Dess, G. G. (1997). Proactiveness versus competitive aggressiveness: Teasing apart key dimensions of an entrepreneurial orientation. *Frontiers of Entrepreneurship Research*, 1997, 47-58.
- Lumpkin, G. T., & Dess, G. G. (2001). Linking two dimensions of entrepreneurial orientation to firm performance: The moderating role of environment and industry life cycle. *Journal of Business Venturing*, 16(5), 429-451.
- MacMillan, I. C., & Day, D. L. (1988). Corporate ventures into industrial markets: Dynamics of aggressive entry. *Journal of Business Venturing*, 2(1), 29-39.
- Mason, M. C., & Gos, L. (2014). The role of agglomeration in entrepreneurship: empirical evidence from Italy. *International Journal of Entrepreneurship and Small Business*, 21(1), 33-54.
- Madhoushi, M., Sadati, A., Delavari, H., Mehdivand, M., & Mihandost, R. (2011). Entrepreneurial orientation and innovation performance: the mediating role of knowledge management. *Asian Journal of Business Management*, 3(4), 310-316.
- McClelland, D. C. (1967). *Achieving society*. Simon and Schuster.
- Michaelas, N., Chittenden, F., & Poutziouris, P. (1999). Financial policy and capital structure choice in UK SMEs: Empirical evidence from company panel data. *Small Business Economics*, 12(2), 113-130.
- Miles, R. E., Snow, C. C., Meyer, A. D., & Coleman, H. J. (1978). Organizational strategy, structure, and process. *Academy of Management Review*, 3(3), 546-562.
- Miller, D. (1983). The correlates of entrepreneurship in three types of firms. *Management Science*, 29(7), 770-791.
- Miller, D., & Friesen, P. H. (1982). Innovation in conservative and entrepreneurial firms: two models of strategic momentum. *Strategic Management Journal*, 3(1), 1-25.
- Mintzberg, H. (1973). *Nature of managerial work*. New York: Harper and Row,
- Mintzberg, H., Raisinghani, D., & Theoret, A. (1976). The structure of "unstructured" decision processes. *Administrative Science Quarterly*, 246-275.
- Moreno, A. M., & Casillas, J. C. (2008). Entrepreneurial orientation and growth of SMEs: A causal model. *Entrepreneurship Theory and Practice*, 32(3), 507-528.
- Morgan, R. E., & Strong, C. A. (2003). Business performance and dimensions of strategic orientation. *Journal of Business Research*, 56(3), 163-176.
- Morris, M. H., & Paul, G. W. (1987). The relationship between entrepreneurship and marketing in established firms. *Journal of Business Venturing*, 2(3), 247-259.
- Murphy, G. B., & Callaway, S. K. (2004). Doing well and happy about it? Explaining variance in entrepreneurs' stated satisfaction with performance. *New England Journal of Entrepreneurship*, 7(2), 5.
- Murphy, G. B., Trailer, J. W., & Hill, R. C. (1996). Measuring performance in entrepreneurship research. *Journal of Business Research*, 36(1), 15-23.
- Myers, S. C. (1977). Determinants of corporate borrowing. *Journal of Financial Economics*, 5(2), 147-175.
- Naldi, L., Nordqvist, M., Sjöberg, K., & Wiklund, J. (2007). Entrepreneurial orientation, risk taking, and performance in family firms. *Family Business Review*, 20(1), 33-47.
- Negash, M. (2002). Corporate tax and capital structure: some evidence and implications. *Investment Analysts Journal*, (56).
- Organisation for Economic Co-operation and Development. (2007). *The SME Financing Gap (Vol. II): Proceedings of the Brasilia Conference, 27-30 March 2006*. OECD Publishing.
- O'Shea, R. P., Allen, T. J., Chevalier, A., & Roche, F. (2005). Entrepreneurial orientation, technology transfer and spinoff performance of US universities. *Research Policy*, 34(7), 994-1009.
- Romano, C. A., Tanewski, G. A., & Smyrnios, K. X. (2001). Capital structure decision making: A model for family business. *Journal of Business Venturing*, 16(3), 285-310.
- Runyan, R. C., Ge, B., Dong, B., & Swinney, J. L. (2012). Entrepreneurial Orientation in Cross-Cultural Research: Assessing Measurement Invariance in the Construct. *Entrepreneurship Theory and Practice*, 36(4), 819-836.
- Schiffer, M., & Weder, B. (2001). *Firm size and the business environment: Worldwide survey results* (Vol. 43). World Bank Publications.
- Segal, G., Borgia, D., & Schoenfeld, J. (2005). The motivation to become an entrepreneur. *International Journal of Entrepreneurial Behaviour & Research*, 11(1), 42-57.
- Soininen, J., Puimalainen, K., Sjögrén, H., & Syrjä, P. (2012). The impact of global economic crisis on SMEs: Does entrepreneurial orientation matter? *Management Research Review*, 35(10), 927-944.
- Spreitzer, G. M. (1995). Psychological empowerment in the workplace: Dimensions, measurement, and validation. *Academy of Management Journal*, 38(5), 1442-1465.
- Smart, D. T., & Conant, J. S. (2011). Entrepreneurial orientation, distinctive marketing competencies and organizational performance. *Journal of Applied Business Research (JABR)*, 10(3), 28-38.

- Stam, W., & Elfring, T. (2008). Entrepreneurial orientation and new venture performance: The moderating role of intra-and extraindustry social capital. *Academy of Management Journal*, 51(1), 97-111.
- Stulz, R. (1990). Managerial discretion and optimal financing policies. *Journal of Financial Economics*, 26(1), 3-27.
- Tang, J., Tang, Z., Marino, L. D., Zhang, Y., & Li, Q. (2008). Exploring an inverted U-Shape relationship between entrepreneurial orientation and performance in Chinese ventures. *Entrepreneurship Theory and Practice*, 32(1), 219-239.
- Venkatraman, N. (1989). Strategic orientation of business enterprises: the construct, dimensionality, and measurement. *Management Science*, 35(8), 942-962.
- Venkatraman, N., & Ramanujam, V. (1986). Measurement of business performance in strategy research: a comparison of approaches. *Academy of Management Review*, 11(4), 801-814.
- Wang, C. L. (2008). Entrepreneurial orientation, learning orientation, and firm performance. *Entrepreneurship Theory and Practice*, 32(4), 635-657.
- Weismeier-Sammer, D. (2011). Entrepreneurial behavior in family firms: a replication study. *Journal of Family Business Strategy*, 2(3), 128-138.
- Wiklund, J. (2006). The sustainability of the entrepreneurial orientation–performance relationship. *Entrepreneurship and the Growth of Firms*, 141-155.
- Wiklund, J., & Shepherd, D. (2005). Entrepreneurial orientation and small business performance: a configurational approach. *Journal of Business Venturing*, 20(1), 71-91.
- Zahra, S. A. (1991). Predictors and financial outcomes of corporate entrepreneurship: An exploratory study. *Journal of Business Venturing*, 6(4), 259-285.
- Zahra, S. A. (1993). Environment, corporate entrepreneurship, and financial performance: A taxonomic approach. *Journal of Business Venturing*, 8(4), 319-340.
- Zahra, S. A., & Covin, J. G. (1995). Contextual influences on the corporate entrepreneurship-performance relationship: A longitudinal analysis. *Journal of Business Venturing*, 10(1), 43-58.